

Claims

Claim 1 (currently amended). An electro-mechanical transducer comprising:

a support frame;

a magnetic assembly comprising a central pole, back plate, magnetic material and top plate, said magnetic assembly producing a magnetic field, that magnetic field having two or more displaced regions of greater intensity, those regions having magnetic flux in substantially similar directions, and separated by and surround surrounded by regions of lower-intensity magnetic field; and, wherein the top plate and center pole produce the regions of varying magnetic intensity;

an acoustic radiating diaphragm attached to and moving with the electrically conductive and mobile member;

an air seal at the edge of the diaphragm;

an electrically-conductive and mobile member disposed in the magnetic field is capable of moving through the magnetic field; and

a suspending element to provide restoring force to the moving parts.

Claims 2-9 (canceled).

Claim 10 (currently amended). An apparatus of ~~Claim 9~~ Claim 1, wherein the top plate and center pole include opposing surface grooves.

Claim 11 (canceled).

Claim 12 (previously presented). An apparatus of Claim 10, with an inter-gap magnetic field intensity less than the gap magnetic field intensity.

Claim 13 (previously presented). An apparatus of Claim 10, with a magnetic field intensity outside the main gap region less than the gap magnetic field intensity.

Claim 14 (canceled).

Claim 15 (original). An apparatus of Claim 10, with the magnetic field intensity between the gaps and those outside the main gap region of substantially similar size and/or magnitude.

Claim 16 (original). An apparatus of Claim 10, with the magnetic field intensity between the gaps and those outside the main gap region of substantially different size and/or magnitude.

Claim 17-20 (canceled).

Claim 21 (original). An apparatus of Claim 1, with paramagnetic material in at least one region of lower flux.

Claim 22 (previously presented). An apparatus of Claim 1, with diamagnetic material in at least one region of lower flux.

Claim 23-26 (canceled).

Claim 27 (currently amended). An apparatus of Claim 1, wherein regions of multiple flux maxima are repeated in an axially-displaced location but with flux in the opposite direction, thereby creating a structure ~~have~~ having 4 or more regions of greater intensity and half of which have flux opposite that of the other half, each grouping having its own attendant coil.

Claim 28 (currently amended). An apparatus of ~~Claim—9~~ Claim 1, wherein the pole has additional grooves beyond those in the top plate.

Claim 29 (currently amended). An apparatus of ~~Claim—9~~ Claim 1, wherein the top plate has additional grooves beyond those in the pole.

Claims 30-36 (canceled).